AMENDMENTS

In the Claims

No new claims are added herein.

No claims are cancelled herein.

Claims 24, 33, 41-48, 50, 55-57, and 59-61 are amended herein.

Claims 1-23 were originally filed.

Claims 1-23 have been previously cancelled, and replaced by claims 24-61.

No Claims have been previously withdrawn.

Claims 24-61 are pending, and are listed following:

24. (Currently amended) An object-oriented system that relates network components with a customer, the system comprising:

a mapping module in communication with a network component data module and with a customer data module to create an object-oriented model of the network components, wherein the network component data module contains network component data arranged in a form that can be manipulated using an object-oriented application, wherein the object-oriented model includes: ~~; and~~

at least one output of the mapping module, the at least one output comprising:

a plurality of sub-tree layers, wherein each layer represents a layer of abstraction, wherein a root represents the highest sub-tree layer and the highest level of abstraction; and

a plurality of customer identifiers assigned to network components to relate each identified customer with network components servicing that identified customer at a lowest abstraction layer.

25. (Previously presented) The system of claim 24, further comprising the network component data module.

26. (Previously presented) The system of claim 24, further comprising the customer data module.

27. (Previously presented) The system of claim 24, wherein the customer identifiers are unique relative to other customer numbers.

28. (Previously presented) The system of claim 24, wherein the mapping module provides a bi-directional mapping that relates network components to the customer and that relates the customer with network components.

29. (Previously presented) The system of claim 24, wherein the network component data module and the customer data module are a network management system in communication with the mapping module.

30. (Previously presented) The system of claim 24, wherein the mapping module is configured to assign the customer identifier to the network component at a second lowest abstraction layer when all of the network components in the lowest abstraction layer provide service to the same customer.

31. (Previously presented) The system of claim 24, wherein the at least one output of the mapping module further comprises:

a service management sub-tree layer wherein each supported service has a set of instances corresponding to the network components that provide the service.

32. (Previously presented) The system of claim 24, wherein each customer identifier in the plurality of customer identifiers comprises a predetermined character string, and wherein each character string has a series of substrings, and wherein each substring corresponds to a network component having a relationship with the customer.

33. (Currently amended) An object-oriented system that relates network components with a customer, the system comprising:

a mapping module in communication with a network component data module and with a customer data module, the mapping module comprising:

means for creating an object-oriented model of network components from ~~data module containing~~ network component data arranged in a form that can be manipulated using an object-oriented application, and wherein the ~~mapping module comprises~~object-oriented model includes:

~~means for creating an object-oriented model of the network components comprising~~ a plurality of sub-tree layers, wherein each layer represents a layer of abstraction, wherein a root represents the highest sub-tree layer and the highest level of abstraction; and

~~means for assigninga~~ plurality of customer identifiers assigned to network components to relate each identified customer with network components servicing that identified customer at a lowest abstraction layer.

34. (Previously presented) The system of claim 33, further comprising the network component data module.

35. (Previously presented) The system of claim 33, further comprising the customer data module.

36. (Previously presented) The system of claim 33, wherein the customer identifiers are unique relative to other customer numbers.

37. (Previously presented) The system of claim 33, wherein the mapping module provides a bi-directional mapping that relates network components to the customer and that relates the customer with network components.

38. (Previously presented) The system of claim 33, wherein the mapping module includes:

means for assigning the customer identifier to the network component at a second lowest abstraction layer when all of the network components in the lowest abstraction layer provide service to the same customer.

39. (Previously presented) The system of claim 33, wherein the mapping module further comprises:

means for creating a service management sub-tree layer, wherein each supported service has a set of instances corresponding to the network components that provide the service.

40. (Previously presented) The system of claim 33, wherein the mapping module further comprises:

means for a creating a customer identifier that indicates the relationship between a plurality of network components and the customer.

41. (Currently amended) A method for relating network components with a customer, the ~~steps~~ method comprising:

creating a mapping module in communication with a network component data module and a customer data module;

creating an object-oriented model of network components from network component data arranged in a form that can be manipulated using an object-oriented application, wherein the object-oriented model includes a plurality of sub-tree layers, wherein each layer represents a

layer of abstraction, and wherein a root represents the highest sub-tree layer and the highest level of abstraction; and

assigning a customer identifier at a lowest abstraction layer to a network component for identifying the customer associated with that network component.

42. (Currently amended) The method of claim 41, further comprising ~~the step of~~:

gathering the network component data; and

arranging the network component data into the form that can be manipulated using the object-oriented application.

43. (Currently amended) The method of claim 41, further comprising ~~the step of~~:

gathering customer data for use in assigning the customer identifier to the network components.

44. (Currently amended) The method of claim 41, wherein the customer identifier is unique relative to other customer identifiers.

45. (Currently amended) The method of claim 41, further comprising ~~the step of~~:

relating a customer to a service when a network component may provide multiple services.

46. (Currently amended) The method of claim 41, further comprising ~~the step of~~:

updating the relationships between the network components and the customer identifiers based on gathering network component data and gathering customer data.

47. (Currently amended) The method of claim 41, further comprising ~~the step of~~:

updating the relationships between the network components and the customer identifiers in accordance with the assigning step.

48. (Currently amended) An object-oriented system that relates network components with a customer, the system comprising:

a mapping module in communication with a network component data module and a customer data module, the mapping module comprising:

means for creating an object-oriented model of network components from network component data arranged in a form that can be manipulated using an object-oriented application, wherein the object-oriented model includes a plurality of sub-tree layers, wherein each layer represents a layer of abstraction, and wherein a root represents the highest sub-tree layer and the highest level of abstraction; and

means for assigning a customer identifier at a lowest abstraction layer to a network component for identifying the customer associated with that network component.

49. (Previously presented) The system of claim 48, further comprising:

means for gathering the network component data; and

means for arranging the network component data into the form that can be manipulated using the object-oriented application.

50. (Currently amended) The system of claim 48, further comprising ~~the step of~~:

means for gathering customer data for use in assigning the customer identifier to the network components.

51. (Previously presented) The system of claim 48, wherein the customer identifier is unique relative to other customer numbers.

52. (Previously presented) The system of claim 48, further comprising:

means for relating a customer to a service when a network component may provide multiple services.

53. (Previously presented) The system of claim 48, further comprising:

means for updating the relationships between the network components and the customer identifiers based on gathering network component data and gathering customer data.

54. (Previously presented) The system of claim 48, further comprising:

means for updating the relationships between the network components and the customer identifiers in accordance with the assigning step.

55. (Currently amended) A computer-readable medium having stored thereon instructions which, when executed by a processor, cause the processor to perform the ~~steps of~~at least the following:

create a mapping module in communication with a network component data module and a customer data module;

creat~~e~~ing an object-oriented model of network components from network component data arranged in a form that can be manipulated using an object-oriented application, wherein the model includes a plurality of sub-tree layers, wherein each layer represents a layer of abstraction, and wherein a root represents the highest sub-tree layer and the highest level of abstraction; and

assign~~ing~~ a customer identifier at a lowest abstraction layer to a network component for identifying the customer associated with that network component.

56. (Currently amended) The medium of claim 55, having stored thereon instructions which, when executed by the processor, cause the processor to perform ~~the further steps of~~at least the following:

gather~~ing~~ the network component data; and

arrange~~ing~~ the network component data into the form that can be manipulated using the object-oriented application.

57. (Currently amended) The medium of claim 55, having stored thereon instructions which, when executed by the processor, cause the processor to perform ~~the further step of~~at least the following:

gather~~ing~~ customer data for use in assigning the customer identifier to the network components.

58. (Previously presented) The medium of claim 55, wherein the customer identifier is unique relative to other customer identifiers.

59. (Currently amended) The medium of claim 55, having stored thereon instructions which, when executed by the processor, cause the processor to perform ~~the further step of~~at least the following:

relate~~ing~~ a customer to a service when a network component may provide multiple services.

60. (Currently amended) The medium of claim 55, having stored thereon instructions which, when executed by the processor, cause the processor to perform ~~the further step of~~at least the following:

update~~ing~~ the relationships between the network components and the customer identifiers based on gathering network component data and gathering customer data.

61. (Currently amended) The medium of claim 55, having stored thereon instructions which, when executed by the processor, cause the processor to perform ~~the further step of~~at least the following:

update~~ing~~ the relationships between the network components and the customer identifiers in accordance with the assigning ~~step~~.